

## FLUORINE-CONTAINING TRICARBOXYLIC ACID-TYPE AMPHOTERIC COMPOUND AND PREPARATION

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Inventor: KAMEI MASAYUKI; others: 02

**Applicant:** DAINIPPON INK KAGAKU KOGYO KK; others: 01

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## Abstract of JP58201752

**NEW MATERIAL:** The compound of formula I (Rf is 3-18C fluorinated aliphatic group; Z is -SO<sub>2</sub>-, -CO-, -(CH<sub>2</sub>)<sub>l</sub>-SO<sub>2</sub>- (l is 1-6), etc.; R<sub>1</sub> is H, -CH<sub>2</sub>CH<sub>2</sub>OH, 1-12C alkyl, etc.; Q<sub>1</sub> is -(CH<sub>2</sub>)<sub>n</sub>- (n is 2-6), etc.; X is inorganic or organic anion; m<sub>1</sub>-m<sub>3</sub> are 1-3; M<sub>1</sub>-M<sub>3</sub> are H, or inorganic or organic cation).

EXAMPLE: The compound of formula II.

**USE:**A surface active agent having excellent surface tension lowering activity, frothing property, resistance to hard water, and solubility.

PROCESS: The compound of formula I wherein X is Cl, Br or I can be prepared by reacting the compound of formula III with the compound of formula IV (X' is Cl, Br or I) in the presence of a basic catalyst (in the case of  $m_1=m_2=m_3$ ) or by reacting 1mol of the compound of formula III with 2.0-2.4mol of the compound of formula V and further reacting with 1.0-1.2mol of the compound of formula VI (in the case of  $m_1=m_2$  not equal to  $m_3$ ).

